

# LG Product Support Manual

How to capture the log of device.



## Log Buffering

LG webOS device, commercialTV/STB/signage saves a basic log automatically. This information can be used for debugging device on the side of product maintenance. This log file can be copied on the side of SI and be shared to device maintenance team.

Basically, this log file is encrypted and can be decrypted only by product maintenance team, who has the authority of access. This means this log files will not be disclosed to anybody of no access right and the one of no access right can't read and parse the context in the log files.

## How to copy log files

### webOS3.5~webOS4.5

1. Change 'Debug Log' menu to 'On' using a factory remote controller & Access USB

```
INSTART → 8.Test Option → Debug Log → On
```

2. Make directories in USB memory stick

```
/LG_DTV/logbuffering/log  
/LG_DTV/logbuffering/etc  
/LG_DTV/logbuffering/bugreport  
* Signage  
  /LG_MONITOR/logbuffering/log  
  /LG_MONITOR/logbuffering/etc  
  /LG_MONITOR/logbuffering/bugreport
```

3. Insert USB to the TV after an issue has happened
4. Wait for 20~25s
5. Share logs of above directories

### Remark

- debug status' item of instart can be changed with factory remote control
- pubkey\_rds.pem **not supported**

## How to copy log files

webOS5.0~

1. Make directories in USB memory stick

```
/LG_DTV/logbuffering/log  
/LG_DTV/logbuffering/etc  
/LG_DTV/logbuffering/bugreport
```

2. Copy the public key provided by LGE ID to USB memory stick

```
/LG_DTV/logbuffering/pubkey_rds.pem
```

*\* If no pubkey\_rds.pem in USB, we can not collect logs*

3. Insert USB memory stick for 5s and then remove it  
(to enable 'Debug log' on INSTART MENU)  
(If you need a booting log, do DC Off and DC On the SET)
4. Insert USB to the TV after an issue has happened
5. Wait for 20~25s
6. Share logs of above directories

**[After the test is completed,]**

1. Remove /LG\_DTV/logbuffering/pubkey\_rds.pem  
or another USB with no /LG\_DTV/logbuffering/pubkey\_rds.pem
2. Insert USB memory stick to recover setting values for log

### Remark

- 'debug status' item of instart **cannot be changed** with Factory remote control  
(Access USB is required to change to 'debug' or 'event')
- pubkey\_rds.pem supported

## Additional Tip For Each Platform

~webOS4.5

### [Change Debug Level]

- Create a json file, capabilities.json

```
/LG_DTV/logbuffering/import/capabilities.json
{
  "ctgr__ROOT": {
    "ctgr__PmLog": {
      "PmLog_playerfactory.default": "debug",
      "PmLog_smp.ls": "debug",
      "PmLog_smp.rm": "debug",
      "PmLog_smp.main": "debug",
      "PmLog_smp.api": "debug"
    }
  }
}
```

### [When to export logs? ]

1. When USB is recognized
  - all log is exported
2. When a crash occurs
  - all log is exported
3. power off when hcap power mode is changed normal to warm
  - all log is exported
4. shutdown (commercial-logger luna is called in shutdown.sh of initscript)
  - only memory log
5. When Memory log file is full  
(memory log buffer is not removed and that ring buffer is maintained. oldest log is removed when new log is saved)
  - only memory log

## Additional Tip For Each Platform

webOS5.0~

### when debug status is **not** "RELEASE"

- As with the existing ~webOS4.5, unencrypted logs are extracted with or without pubkey\_rds.pem
- When USB log buffering is finished, a "Log Capture Complete" toast popup is generated.

### when debug status is "RELEASE"

- Changes related to log buffering since #136
- If a USB with `/LG_DTV/logbuffering/pubkey_rds.pem` is connected (attached)
  - 1) export encrypted Crash log to `/LG_DTV/logbuffering/bugreport`
  - 2) export encrypted `/var/log/` and `/var/spool/` to `/LG_DTV/logbuffering/etc`
  - 3) 'Debug Log' is changed to On in Instart
  - 4) if `/LG_DTV/logbuffering/import/overrides.conf` is exist, the file is copied to `/var/preferences/pmloglib` (PmLog debug Log level adjustable)
  - 5) If `/LG_DTV/logbuffering/export` exists, you can check the debug level by creating `debug_level.txt` (same with PmLogCtl show)
- If a USB without `/LG_DTV/logbuffering/pubkey_rds.pem` is connected (attached)
  - 1) No files are saved to `/LG_DTV/logbuffering/bugreport`.
  - 2) No files are saved to `/LG_DTV/logbuffering/etc`
  - 3) 'Debug Log' of Instart is changed to Off (PmLog is not printed)
  - 4) `/var/preferences/pmloglib` is removed
  - 5) No files are saved to `/LG_DTV/logbuffering/export`
- `overrides.conf`

```
{
  "overrides": [
    { "name": "lginput2", "level": "debug"},
    { "name": "btmngr", "level": "debug"}]
}
```

## Additional Tip For Each Platform

webOS5.0~

The following directories are zipped and copied during logbuffering.

```
/var/log/  
/var/spool/  
/var/lib/connman/
```

### Data stored in each logbuffering folder

Folder name created on USB	data location within the set
/logbuffering/netlog	<ul style="list-style-type: none"><li>• <b>/var/lib/connman/debug-mode</b> file is exported</li></ul>
/logbuffering/log	<ul style="list-style-type: none"><li>• log generated by commercial-logger</li><li>• You can create the same file under <b>/var/logbuffering/</b> using <b>writeToFile</b> luna</li></ul>
/logbuffering/import/overrides.conf	<ul style="list-style-type: none"><li>• You can adjust the PmLog debug level by copying it to <b>/var/preferences/pmloglib</b>.</li></ul>
/logbuffering/export	<ul style="list-style-type: none"><li>• The <b>/logbuffering/export/debug-level.txt</b> file is created and the result of the "<b>PmLogCtl show</b>" command is saved.</li></ul>
/logbuffering/etc	<ul style="list-style-type: none"><li>• <b>firmwareVersion_db_date_time.tgz</b></li><li>• A compressed file under <b>/var/db/main</b></li><li>• <b>firmwareVersion_logs_date_time.tgz</b></li><li>• A compressed file of all files under <b>/var/log</b> , <b>/var/spool</b>, <b>/var/lib/connman</b></li></ul>
/logbuffering/bugreport	<ul style="list-style-type: none"><li>• When a crash occurs, files under <b>/var/spool/uploadd/pending</b> (the crash file is created) are encrypted and copied to <b>/logbuffering/bugreport</b>.</li></ul>

### When to export logs?

- When USB is recognized
- When a crash occurs
- At the time of shutdown, the writeLogFile API of commercial-logger is called as shutdown in shutdown.sh of initscripts, and the memory log is saved and collected in the previous log (/var/spool/rdx/).
- When the memory log is full (the memory log at the full point is saved as a USB file, the memory log buffer is not cleared, and the oldest log is deleted as new logs are written)

## Additional Tip For Each Platform

webOS6.0~

### How to check message log when debug log is off (CommercialTV/STB)

- When debug logging is turned off, message logs are collected in **/var/log/dbg-log**.
- Regardless of the development version or mass production version, the function is performed according to the debug log conditions.
- In the case of mass production, only the log registered in the whitelist is output as a message, and only the messages log is uploaded to the SDP server.
- The log extracted to **/var/log/dbg-log** is not uploaded to the SDP server, so there is no security problem.
- Due to performance issues, the dbg-log has a special blacklist ( **/etc/PmLogDaemon/blacklist.txt**, **uploadWhitelist.txt**) and its modules and **msgld** are filtered out.

### Collect secaudit log (Signage only)

Folder name created on USB	data location within the set
<b>/logbuffering/etc</b>	<ul style="list-style-type: none"><li>• <b>firmwareVersion_db_date_time.tgz</b> A compressed file of subfiles of <b>/var/db/main</b></li><li>• <b>firmwareVersion_logs_date_time.tgz</b> A compressed file of all files under <b>/var/log</b>, <b>/var/spool</b>, and <b>/var/lib/connman</b></li><li>• <b>firmwareVersion_secaudit_date_time.tgz</b> A compressed file of subfiles of <b>/var/secaudit/</b></li></ul>

